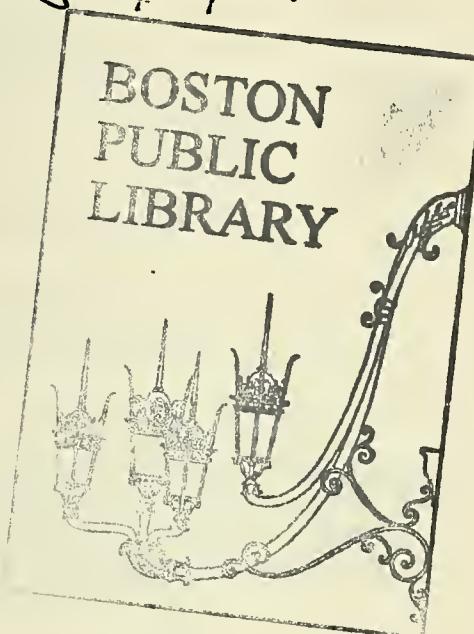


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GOVDOC

BRA
4432

Master correction
copy (8/7/89)



July 24, 1989

Mr. Lawrence C. Moulter
Chairman/President
New Boston Garden Corporation
150 Causeway Street
Boston, MA 02114

Dear Mr. Moulter:

Re: New Boston Garden Development

Enclosed is the Scoping Determination for the New Boston Garden Development (the "Proposed Project"), for which you recently submitted a Project Notification Form ("PNF") pursuant to Article 31 of the Boston Zoning Code ("the Code"). This Scoping Determination requests information that the Boston Redevelopment Authority ("BRA") requires in response to the PNF which you submitted April 24, 1989.

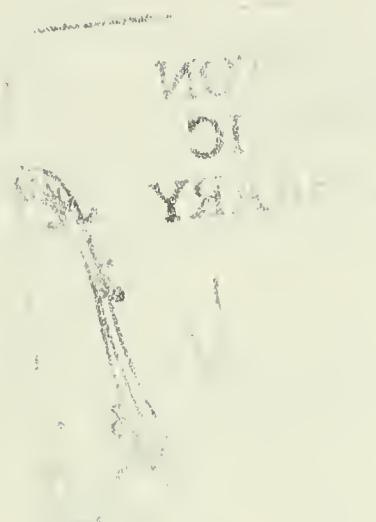
The BRA may require additional information during the course of our review of the Proposed Project. If you have any questions concerning the Scoping Determination or otherwise in connection with review of the Proposed Project, please contact Eric Schmidt at 722-4300.

Sincerely,

Stephen Coyle

Enclosure

SP6/06.RPT
072589/1



BOSTON REDEVELOPMENT AUTHORITY

SCOPING DETERMINATION NEW BOSTON GARDEN DEVELOPMENT

PROJECT DESCRIPTION

PROJECT NAME: New Boston Garden Development

PROJECT LOCATION: 120-150 Causeway Street (?)

APPLICANT: New Boston Garden Corporation

PROJECT NOTIFICATION: April 24, 1989

The Boston Redevelopment Authority ("BRA") is issuing this Scoping Determination pursuant to Section 31-5 of the Boston Zoning Code (the "Code"), in response to a Project Notification Form ("PNF") which the Proponent filed April 24, 1989. The Scoping Determination requests information that the BRA requires for its review of the Proposed Project in connection with the following:

- (a) Development Review pursuant to Article 31 of the Code;
- (b) Approval of a Development Impact Project Plan, pursuant to Article 26A of the Code, and the entering of agreements for the Development Impact Project Contribution and Jobs Contribution Grant, pursuant to Articles 26A and 26B of the Code; and
- (c) Approval of a Development Plan pursuant to Section 39-9 of the Code in conformity with the procedures set forth in Section 3-1A.a and 39-11, and the provisions of Section 39-10 of the Code.

PREAMBLE

The BRA is reviewing the Proposed Project pursuant to multiple sections of the Code. The Proposed Project is being reviewed pursuant to Article 31 of the Code, Development Review Requirements, which sets out a comprehensive procedure for project review and requires the BRA to review the project's impacts in the following areas: transportation, environmental protection, urban design, historic resources, and infrastructure systems. Article 31 requires the submission of a satisfactory Final Project Impact Report prior to the issuance of a building permit.

The Proposed Project is located within the North Station Economic Development Area, an area in which Planned Development Areas ("PDAs") are permitted. The Proposed Project will be reviewed pursuant to Sections 39-10 and 39-11, which establish review procedures and requirements for PDAs. since the Applicant proposes the construction of an arena (see below).

The review of the Proposed Project will be limited to any and all elements proposed by the New Boston Garden Development and/or other elements which are

, Nashua Street reconstruction, and the

constructed by others specifically for development of the Proposed Project. However, analysis and mitigation studies will be limited to the proposed project as outlined in the "MOA" signed in January, 1989 between the City and New Boston Garden Development Corporation. The Applicant is not responsible for providing information or analysis or impacts which may be caused by other on-site construction projects such as MBTA Green Line, Orange Line and parking garage construction as well as the State DPW Central Artery reconstruction.

I. NEW BOSTON GARDEN DEVELOPMENT PROPOSED PROJECT DESCRIPTION

According to the PNF filed on April 24, 1989, the Proposed Project, located on a 6.57 acre site in the North Station Economic Development Area the "North Station EDA", is generally bounded by Causeway Street, Nashua Street, Accolon Way, and the Central Artery Ramps. The Proposed Project includes the creation of a multi-purpose sports arena, a mass transit station, and three commercial buildings including office, hotel, retail and below-grade parking uses. Uses presently occupying the site include a sports arena, related retail, a mass transit facility, office, and surface parking. The PNF filed is consistent with and includes the Memorandum of Agreement ("MOA") signed between the City of Boston and the Applicant. The MOA set forth the allowable development program, and the funds which the city will receive for the use of its air-rights.

As described in the PNF, the characteristics of the Proposed Project include:

TOTAL SQUARE FEET:	3,061,500
OFFICE:	1,790,000
Building A:	250,000
Building B:	767,000
Building C:	773,000
RETAIL:	90,000
HOTEL:	367,000 (350 rooms)
SPECTATOR EVENTS:	744,500 (19,500 seats)
PARKING:	1,100 spaces
SITE AREA:	286,400
PROPOSED HEIGHTS:	400'/375'/350'/175'
PROPOSED FAR:	10.6

II. THE NORTH STATION ECONOMIC DEVELOPMENT AREA PLAN AND ARTICLE 39 OF THE CODE

Through its approval of Article 39 of the Boston Zoning Code on June 29, 1989, the BRA adopted the North Station Economic Development Area Plan ("Plan") as the portion of the general plan for the city governing the North Station EDA. The Zoning Commission will be considering this Article for adoption shortly. If

approved by the Zoning Commission and approved by the Mayor, Article 39 of the Code will establish the legal framework for the realization of the Plan. Pursuant to Article 39, the Proposed Project is located in the North Station EDA.

The Plan was developed to create a gateway to the city by rail and highway from the north, and to direct downtown development in a way that promotes balanced growth for Boston, and to facilitate the redevelopment of an aging facility which is critical to Boston's sport fans, commuters, and citizens in general.

The primary purposes of the North Station EDA zoning are:

- o to direct downtown development in a way that promotes balanced growth for Boston;
- o to channel growth away from congested areas and towards underutilized sites;
- o to create a gateway to the city by rail and highway from the north;
- o to create a mixed-use district which includes office, retail, research and development, biomedical, institutional, residential, sports facility and entertainment uses;
- o to provide an area within the downtown to enhance the expansion of Boston's biomedical and research and development sectors;
- o to create a complex of facilities and services which will foster economic growth in Boston and throughout the region;
- o to increase the number of jobs in those sectors of the economy likely to employ Boston residents;
- o to promote the creation and incubation of new research and development-intensive businesses;
- o to permit a controlled mix of research and development uses along with facilities supportive of these uses;
- o to create a functionally and architecturally unified district which is compatible with the North End and Bulfinch Triangle;
- o to create vistas and access to the Charles River; and
- o to create new recreational space along the Charles River.

Planned Development Areas

Article 39 establishes areas in which PDAs are permitted in order to encourage large-scale private development on underutilized sites. A PDA designation may be granted only if a proposed project in a PDA includes at least one of the following: diversification and expansion of Boston's economy in biomedical and

research activities; construction of major, unique civic facilities; or creation or retention of job opportunities.

Pursuant to Section 39-6 of the Code, the Proposed Project is located within an area in which the establishment of PDAs is permitted. Specifically, the Proposed Project is located within the New Boston Garden Development Area in which an Proposed Project is allowed an as-of-right building height of four-hundred (400) feet and an as-of-right FAR of eleven (11).

Construction of Major, Unique Civic Facilities

The BRA may approve a Development Plan as meeting the standards for approval if the Development Plan proposes a plan for development consistent with the goals and objectives of the North Station EDA Plan, and if the Development Plan includes construction of major, unique civic facilities. If the Development Plan includes construction of major, unique civic facilities, the BRA may approve such a Development Plan only if the Proposed Project includes an indoor sports and entertainment facility and if the Proposed Project is coordinated with North Station as the major transportation gateway to downtown Boston by rail, auto, and public transportation from the north.

The developer has proposed to construct a new Boston Garden Arena complex that will provide an arena area with a slightly larger seating capacity than exists today (existing 17,000 proposed 19,500). This arena will be the first phase of a multi-phased mixed-use development of hotel and commercial uses. The new Arena will be open and functioning prior to the demolition of the existing structure.

The proposed area is an acceptable submission under this standard, subject to compliance with the requirements outlined in this Scoping Determination. The new civic facility must be constructed of high quality materials and "state of the art" planning and design functions. The completed arena must be of a civic quality in its architectural design that it becomes the new symbol for public "gathering places" in Boston.

Day Care Facilities

The continuing movement of women into the workforce has resulted in a growing need for safe, affordable day care outside the family home. Article 39 requires that a Proposed Project over one million square feet either devote at least 12,000 square feet to day care facilities on-site or to create or cause to be created off-site within the North Station EDA, the Bulfinch Triangle District, or the North End. However, at least 4,000 square feet must be provided on-site. The DPIR must specify the location and program for day care for the Proposed Project in accordance with Section 38.12.1. The Proposed Project must also specify the phasing of the day care in conjunction with the project phasing.

Use Regulations

Uses which are Allowed and/or Conditional within the North Station PDA area are described in Section 39-12 pages 10 than 19 of Article 39. Uses not listed in this section are forbidden.



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analysis of mass and bulk alternatives in addition to that is extified

III. DEVELOPMENT REVIEW REQUIREMENTS - ARTICLE 31

Article 31 of the Code provides a process by which the BRA reviews large scale development projects. As previously stated, the BRA is issuing this Scoping Determination pursuant to Section 31-5. This Scoping Determination requests certain information for a development option in addition to the Proposed Project described in the PNF. The DPIR must conform to Article 31 and to this Scoping Determination.

In this list of required scoping materials, information on two options is requested for various categories of review. These options are as follows:

- A. The project as proposed with the hotel component in Tower A along New Nashua Street, and without the Causeway Street off-ramps from the reconstructed Central Artery.
- B. The project with the Causeway Street off-ramps from the reconstructed Central Artery and a Hotel component at tower B. Notwithstanding the hotel component remaining in Tower A, the Causeway ramps must be studied.

Information is required for Option A only, unless specifically requested for Option B as well.

Eric:
Please see proposed new section "G" which follows p. 22

GENERAL INFORMATION

1. Applicant Information

a. Development Team

- (1) Names
 - (a) Developer (including description of development entity)
 - (b) Attorney
 - (c) Project Consultants
- (2) Business Address and telephone for each
- (3) Designated contact for each
- (4) Description of current or formerly-owned developments in Boston

b. Legal Information

- (1) Legal judgments or actions pending concerning the proposed project
- (2) History of tax arrears on property owned in Boston by the development team

(3) Evidence of site control over the project area, including current ownership and purchase options of all parcels in the proposed project, all restrictive covenants and contractual restrictions affecting the proponent's right of ability to accomplish the proposed project, including any third party agreement with the Massachusetts Bay Transit Authority ("MBTA"), and the nature of the agreements for securing parcels not owned by the prospective developer

2. Financial Information

(See Appendix 1 for required financial information)

Development and Operating Pro Formas should be provided for Option A. A sensitivity analysis revealing the financial performance of Option B relative to Option A is required in the DPIR.

- a. Full disclosure of names and addresses of all financially involved participants and bank references
- b. Development Pro Forma
- c. Ten Year Operating Pro Forma

3. Project Area

- a. Description of metes and bounds of project area including all land or easements owned or required for completion of said project

4. Public Benefits

- a. Development Impact Project Contribution and Jobs Contribution Grant specifying amount of housing linkage and jobs linkage contributions and method of housing linkage contribution (housing payment or housing creation)
- b. Increase in tax revenues, specifying existing and estimated future annual property taxes
- c. Anticipated employment levels including the following:
 - (1) Estimated number of construction jobs
 - (2) Estimated number of permanent jobs
- d. Submission of Boston Residents Construction Plan in accordance with the Boston Jobs Policy requiring that 50, 25, and 10 percent of person-hours in construction jobs on publicly-assisted or large-scale private commercial projects be worked by Boston residents, minorities and women

- e. Submission of voluntary Employment Opportunity Plan presenting good-faith efforts to achieve the goal that the profile of permanent employees in the building be 50 percent Boston residents
- f. Description and location of day care facilities. An amount equal to at least 12,000 square feet must be provided either on-site or within the North Station EDA, the Bulfinch Triangle District, or the North End, provided that at least 4,000 square feet is on-site.
- g. Description of benefits specific to the arena use which accrue as a result of the construction of the Proposed Project

5. Regulatory Controls and Permits

- a. Existing zoning requirements, zoning computation forms, and any anticipated requests for zoning relief, and any actions required pursuant to the provisions of any Urban Renewal Plans, the provisions of which govern the site
- b. Anticipated permits required from other local, state, and federal entities with a proposed application schedule, ~~including the differences in permits required and proposed application schedules between Options A and B~~
- c. If the proposed project is subject to the Massachusetts Environmental Policy Act (MEPA), submission of required documentation including copies of the Environmental Notification Form and a statement as to whether the applicant will coordinate the submission of materials required by MEPA with the submission of materials required by this scope

6. Community Groups

- a. Names and addresses of project area owners, displacees, abutters, and also any community groups which, in the opinion of the applicant, may be substantially interested in or affected by the proposed project
- b. A list of meetings proposed and held with interested parties as well as the commitment to a review process and schedule which will engage each of the abutting neighborhoods as ~~required~~ by the Downtown North Association

requested

B. TRANSPORTATION COMPONENT

The following requirements incorporate comments by the Boston Transportation Department ("BTD") regarding transportation issues and objectives for the New Boston Garden Development. These comments include comments of abutters to the project including Downtown North Association, Massachusetts Historic Commission and Spaulding Rehabilitation Hospital.

The following must be submitted for Option A, unless otherwise specified:

1. Vehicular Traffic

~~All information regarding vehicular traffic must be submitted for both options A and B. In addition, The information presented in this section must be submitted for existing conditions, "partial-build," and full-build. For the purposes of this section, "partial-build" shall be defined as the instant in time when the first two of the four major components of the Proposed Project are completed, with the four major components of the Proposed Project defined as Buildings A, B, and C, and the arena, as described in the PNF. Also, for the two options studied during the "partial-build" condition, one study should assume that Central Artery circulation remains unchanged, and the other should assume that the Central Artery is reconstructed.~~

The following conditions should be studied:

1. 1989
Existing site conditions
Existing Artery

Partial-build year
No-build of project
Existing Artery

Partial-build year
Partial-build of project
Existing Artery

1999
No-build of project
New Artery

1999
Full-build of project
New Artery

3. Analyses of the existing conditions at the following intersections:

- o Leverett Circle
- o New Nashua Street / Martha Way
- o Staniford Street / Merrimac Street / Causeway Street
- o Causeway Street / Canal Street
- o Causeway Street / New Accolon Way / Central Artery Ramps
- o Causeway Street / Commercial Street / North Washington Street
- o Cambridge Street / Staniford Street
- o Cambridge Street / New Chardon Street
- o New Chardon Street / Merrimac Street
- o New Chardon Street / North Washington Street / Blackstone Street
- o Sudbury Street / Congress Street
- o Sudbury Street / Blackstone Street
- o City Square ← intersection

Background development and transportation projects. Due to the complex and significant nature of the roadway network changes contemplated for this area, information regarding background development and transportation projects should incorporate the findings of the State's Central Artery Team along with a list of individual background projects determined in consultation with the BRA. ~~A no-build scenario must be presented for the full-build year (1999) with the assumption that the Causeway Street off ramp is constructed.~~

c. An analysis of the impact of the Proposed Project as follows:

- (1) Projection of vehicular trip generation (including automobiles, taxis, trucks, service vehicles and buses) for daily a.m and p.m. peak hours and during peak periods associated with arena events ←
- (2) Trip distribution

Projections should also be conducted for a weekday Arena event during a period representing peak design conditions.

- (3) Modal split and vehicle occupancy analysis differentiating between those for arena events and those not for arena events
- (4) Site Access (volumes at the Proposed Project's driveways)

Levels of service at the above mentioned intersections

2. Parking

- a. Existing parking conditions in the study area
 - (1) Parking Characteristics in proximity to the site
 - (2) The supply of parking, both on and off street
- b. Number of spaces proposed indicating public and private allocation
- c. Proposed Project's impact on demand for parking
- d. ~~For Options A and B, A~~ parking plan, including layout, access, size of spaces, the level of utilization of spaces by different user types, and the degree to which joint use of spaces can result in lower parking space demand
- e. Based on the assumption that the Proposed Project's parking facility will be located adjacent to a parking facility proposed by the MBTA, information should be provided to clarify the degree to which the garages will function in a coordinated manner, including but not limited to the degree to which those persons destined for the Proposed Project will use the MBTA garage, and vice-versa.
- f. Information regarding rate structures and parking operations management
- g. Location of and demand for bus storage

3. Loading

- a. Number of docks
- b. ~~For Options A and B, T~~ the location and dimension of docks
- c. Estimated size and types of vehicles serving the site and particularly the arena, and the ability of the proposed loading docks to accommodate those vehicles
- d. Analysis of one-way versus two-way access roadway for trucks along Accolon Way

4. Access
 - a. Size and maneuvering space for all vehicles on site or in public right-of-way; and the internal maneuvering space for trucks of all sizes, especially with regard to the disruption of on-street traffic flow by trucks backing in or out. Analysis of potential pedestrian-vehicular conflicts must be presented in the DPIR. Information required in this section should be provided at a minimum in plan form showing any and all levels accessible by vehicle.
 - b. Access, curb cuts, and/or sidewalk changes required with specific references to vehicular volumes at each driveway accessing the site
 - c. Analyses of access to loading docks ~~under a variety of access scenarios~~
5. Public Transportation
 - a. Location and availability of existing public transportation facilities
 - b. Usage, capacity, and planned improvements to the existing system
 - c. Demand and capacity analysis for peak hours and for periods of peak arena trip generation
6. Pedestrian Circulation
 - a. Existing and proposed ~~for both Options A and B~~ pedestrian conditions in the study area and on-site, including identification of pedestrian activity, circulation deficiencies and barriers, and measures to improve such conditions
 - b. Pedestrian demand analysis in a ~~qualitative~~ quantitative analysis format of the Proposed Project
 - c. Pedestrian volume to capacity analysis in a ~~quantitative~~ qualitative analysis format on all sidewalks on the periphery of the site, and connections to the Proposed Project across Causeway Street, Lomasney Way, and New Nashua Street
 - d. Flow of pedestrians through the project site during both peak hours and arena events
 - e. Connections to public transportation station stops
7. Access Plan
 - a. Measures to manage and reduce parking demand and optimize use of available parking spaces, including:

- o Ride-sharing incentives and information dissemination
 - o Set-asides for high occupancy vehicles (specify number and location)
- b. Measures to encourage public transportation use and mitigate project impact on public transit including:
 - o Mass transit information dissemination
 - o MBTA pass sales and subsidies
- c. Measures to reduce peaking, including:
 - o Travel demand modifications
 - o Encouragement of flexible work hours
 - o Restrictions on service and goods deliveries
- d. Measures to mitigate project impacts, including:
 - o Improvements in pedestrian environment
 - o Truck access management plan
- e. Measures to mitigate construction impacts, including:
 - o Scheduling construction to ensure compatibility with the Central Artery construction schedule, as feasible
 - o Time and routes of truck movements and materials deliveries
 - o Worker parking and commuting plan
 - o Location of construction staging areas
 - o Measures to protect the public safety
 - o Measures to ensure access along Causeway and New Nashua Streets
 - o Storage of materials and equipment

Alternatives for analysis (see section III.B.1.) are specified under each of the environmental topics which follow.

f. Monitoring Program

A long term program to monitor the travel behavior of project tenants and other users of the site and the effectiveness of mitigation measures must be submitted. Information must include travel mode, vehicle occupancy rate, and employee origin/destination surveys.

C. ENVIRONMENTAL PROTECTION COMPONENT

Where impacts caused by the Central Artery may change data in any of the following tests, an analysis should be conducted for existing conditions and for conditions of Central Artery reconstruction and MBTA work. The following analysis responds to the request made by Spaulding Rehabilitation Hospital as well as other abutters.

Alternatives A, D, and E

1. Wind

Wind analyses must be conducted for ~~Options A and B~~.

A quantitative (wind tunnel) analysis of the potential pedestrian level wind impacts of the proposed buildings is required. This analysis must determine the potential pedestrian level winds adjacent to and in the vicinity of the project site and shall identify any areas where wind velocities are expected to exceed acceptable levels, including the BRA's guideline of an effective gust velocity of 31 mph not to be exceeded more than 1% of the time.

Particular attention must be given to public and other areas of pedestrian use, including, but not limited to, entrances to the Proposed Project and to adjacent buildings, sidewalks on the project site and adjacent to the project site, existing and future MDC parkland along the Charles River Dam, and other public open spaces.

pedestrian
locations
of particular
interest

Specific ~~hot wire~~ locations should be determined in consultation with and with the approval of the BRA.

For areas where wind speeds are projected to exceed acceptable levels, measures to reduce wind speeds and to mitigate potential adverse impacts must be identified.

2. Shadow

Alternatives D and E

Shadow Analyses must be conducted for ~~Options A and B~~.

A shadow analysis is required for existing and build conditions for the hours of 9:00 a.m., 12:00 noon, and 3:00 p.m. for the vernal equinox, summer solstice, autumnal equinox, and winter solstice. It should be noted that due to time differences (daylight savings vs. standard), the autumnal equinox shadows would not be the same as the vernal equinox shadows and therefore separate shadow studies are required for the vernal and autumnal equinoxes.

The shadow impact analysis must include net new shadow as well as existing shadow and must clearly show the incremental impact of the proposed buildings. Shadows of surrounding buildings also shall be included, as appropriate, to indicate clearly the net shadow impact of the Proposed Project.

Particular attention must be given to existing or proposed public open spaces and major pedestrian areas, including, but not limited to, the sidewalks surrounding the project site, the Proposed Project's open spaces and pedestrianways, existing and future MDC parkland along the Charles River and the Charles River Dam, and other public open spaces.

Design or other mitigation measures to limit or minimize any adverse shadow impact must be identified.

3. Daylight

Alternatives D and E

A daylight analysis for ~~no build conditions and each alternative~~ must be provided by measuring the percentage of skydome that is obstructed by the proposed project buildings. The analysis shall be based on the BRADA program. Viewpoints must be taken from each public way bordering or within the project site, centered opposite each major building component in the proposed project. For the analysis of Causeway Street impacts, comparisons should be made to the existing conditions on both sides of the street. The elevated Green Line tracks shall not be included in either no-build (existing) or proposed buildout conditions.

4. View Studies

Alternatives A, D and E

View Analyses must be conducted for ~~Option A and B~~. View study shall be conducted of existing project and proposed development from each of the major roadways in the area, from each of the public parks or open spaces within the vicinity and from the abutting parcels whose views may be altered due to the construction of the tower elements. The view locations should be approved by the BRA before analysis is begun. View studies should ~~be cognizant~~ of light and shadow, massing and bulk, texture and color of the materials and general fenestration patterns of the proposed development. ~~address~~

5. Air Quality

Alternatives A, D and E

Air quality analyses must be conducted for ~~Options A and B~~.

DPIR must describe the existing air quality in the vicinity of the Proposed Project, and must evaluate ambient air quality levels to determine conformance with the National Ambient Air Quality Standards of the U.S. Environmental Protection Agency.

A future air quality (carbon monoxide) analysis is required for any intersection where level of service is expected to deteriorate to D and the Proposed Project causes a ten percent increase in traffic, or where the level of service is E or F and the Proposed Project contributes to a reduction of level of service. The methodology and parameters of the traffic-related air quality analysis must be approved in advance by the Massachusetts Department of Environmental Quality Engineering ("DEQE") and the BRA. Mitigation measures to eliminate or avoid any violation of air quality standards must be described. Traffic on the abutting Central Artery roadway and ramps shall be included in the air quality analysis, as well as background traffic.

In addition, a description of the garage exhaust system, including location of exhaust vents and specifications and an analysis of the impact on pedestrian level air quality from operation of the exhaust system shall be required. Measures to avoid any violation of air quality standards shall be described.

The DPIR also must describe ventilation requirements and exhaust system for the covered train tracks, and shall evaluate the air quality impacts resulting from the venting of diesel exhausts from the train station. Particular attention shall be given to NO₂ and TSP emissions and to diesel fumes. The air quality analysis shall model the dispersion of these pollutants and the diesel fumes and shall describe their impacts on pedestrians and on adjacent buildings and their ventilation systems. The analysis must compare the estimated emissions with the DEQE policy guidelines for NO₂ concentrations and shall describe appropriate mitigation measures to avoid any violation to avoid any violation of these guidelines. The methodology and parameters of this analysis must be reviewed with and approved by DEQE and the BRA in advance.

6. Water Quality

The DPIR must describe the existing and future storm drainage system, the location of storm drainage outlets, and the resulting water quality at the outlets. ← *the analysis should address Alternatives A and E.*

Mitigation measures to prevent the release of pollutants into the receiving waters shall be described. (see section III.F.)

7. Geotechnical Impact

An analysis of existing sub-soil conditions, potential for ground movement and settlement during excavation and potential impact on adjacent buildings and utility lines, and on the adjacent MBTA transit tunnels shall be described. This analysis shall include a description of the foundation construction methodology, pile-driving proposals, the amount and method of excavation and the disposal of the excavate, and measures to prevent damage to adjacent buildings, utility lines, and MBTA facilities. ← *on*

8. Solid and Hazardous Wastes

property controlled by the Proponent

The amount and method of demolition of the existing buildings and infrastructure on the project site must be described and the disposal site for the demolition of debris shall be identified. The removal and disposal of any asbestos material from buildings to be demolished shall also be described.

The generation of solid wastes from the Proposed Project and plans for removal and disposal must be described.

The DPIR shall describe whether any oil contamination or potentially hazardous materials exist on the site and shall describe their disposal. If Chapter 21E site evaluation has been prepared for the site, it shall be included in the DPIR. ←

*the effect
of the New
Boston
Garden
Development
on*

*This
analysis
should
address
Alternative G.*

Note:
HUD
guidelines
intended
for housing
and other
noise sensitive
uses.

9. Noise

An evaluation of the ambient noise levels outdoors shall be required to determine conformance with the Design Noise Levels established by the U.S. Department of Housing and Urban Development. Should excessive ambient noise levels exist, mitigation measures to reduce these levels during or after construction shall be described.

Anticipated long-term noise increases from project-generated traffic and from the project's building mechanical equipment shall be evaluated, and the potential impacts on sensitive receptors, including pedestrians and nearby residences, hospitals, and recreation areas, shall be described.

10. Construction Impacts

This analysis should address Alternatives A, D and E

Construction impact analyses must be conducted for Options A and B.

(Alternatives C and E)

A construction impact analysis is required which includes a description and evaluation of the following:

- a. Potential dust and pollutant emissions and mitigation measures to control these emissions
- b. Potential noise impact and mitigation measures to minimize increase in noise levels
- c. Location of construction staging areas and construction worker parking
- d. Construction Schedule, including hours of construction activity
- e. Access routes for construction trucks and anticipated volume of construction truck traffic
- f. Measures to protect the public safety
- g. Coordination of project construction with the construction of several other major projects within the immediate vicinity during the same period, including the Central Artery reconstruction, the MBTA underground garage and commuter rail platform work, the Green Line rapid transit relocation, and the realignment of Nashua Street. The cumulative impacts of the projects shall be measured, including air quality and noise levels, construction traffic, access, and parking, and staging areas.
- h. Phasing of any or all work that may coincide with Central Artery reconstruction.

Coordination

11. Rodent Control

An analysis of the impact of project construction on rodent populations and a description of the proposed rodent control program and compliance with applicable City and State regulatory requirements is required.

D. URBAN DESIGN COMPONENT

~~Urban design materials must be submitted for Options A and B.~~

Pursuant to Section 31-5, Paragraph 2, and Section 31-8 of the Code, the following urban design objectives should be addressed in the analysis of both options A and B required in the DPIR.

1. The project's design should create a cluster of towers which can act as a gateway image for the City of Boston. The tower cluster and massing can be of a scale similar to the tower cluster in the Midtown Cultural District. Due to the larger scale elements adjacent to North Station, the floorplates of the towers may be larger than those in the Midtown Cultural District.
2. The project design should ensure that the new development does not overwhelm the adjacent Bulfinch Triangle historic district. The scale and character of the project should be compatible with downtown Boston. Average setbacks of forty (40) feet at a height of 125 feet and required pedestrian arcades on three sides of the project will mitigate the environmental impacts and reinforce the visual patterns of streets and alleys found throughout Boston's downtown.
3. The Proposed Project should improve the pedestrian environment. Pedestrian arcades and alleys should serve to extend the Bulfinch Triangle toward the Charles River and mitigate against a "superblock" image and form. The public use of both the arena and the train station requires that the public environment and pedestrian movement be paramount design issues. Attention to these aspects of the project will require sidewalks sufficiently wide to accommodate large numbers of pedestrians, generous building setbacks to protect against down drafts of wind, and massing which ensures that sufficient light and air reaches street-level.
4. Both design options should separate pedestrian from vehicular traffic at all access and egress points. Due to the large number of persons moving in and out of the area at rush-hour and after garden events, it is critical to minimize the opportunities for conflict between vehicular and pedestrian traffic, thereby ensuring the smoothest flow of pedestrians through the site and the highest degree of pedestrian safety attainable.
5. As a major, civic project, the New Boston Garden Development must feature the highest quality design standards in the public areas, including the train room and platform area, as well as areas connecting

to MBTA facilities. The arena portion of the project should also express a high quality of design throughout. Due to the arena's location and its visibility from the expressway, special attention should be paid to the design of its facade and roof, especially those areas which will be exposed during the phasing/reconstruction period.

Due to the complexity of the Proposed Project and the proposed construction of the Central Artery as well as the diverse character of the adjacent urban design context, a rigorous urban design analysis of the project must be conducted. The purpose of this analysis is to identify any important elements on or adjacent to the site that shape the siting and massing of the New Boston Garden Development and other potential future development integrated in the area.

A description of elements on or adjacent to the site that shape the siting and massing of the components of the project, and how these components address the issues of access, orientation, massing, site planning, and urban design must be submitted. The area to be included in this study is bounded by North Washington Street to the east, a line approximately 500 feet beyond and parallel to Causeway Street to the south, New Nashua Street to the west, and the Central Artery to the north.

In addition, the applicant must show the degree to which both design options conform to existing urban design requirements as set forth in Article 39 of the Zoning Code.

In order to determine that the Proposed Project (a) is architecturally compatible with surrounding structures; (b) exhibits an architectural form and massing and details that enhances the urban design features of the district in which it is located; (c) augments the quality of the pedestrian environment; and (d) is consistent with the design guidelines for the area, the following information must be submitted for both development options.

1. Written description of program elements and space allocation for each element
2. Plan for the surrounding area and district and sections at an appropriate scale (1" = 100' or larger) showing relationships of the proposed project to the surrounding area and district:
 - a. massing
 - b. building height
 - c. scaling elements
 - d. open space
 - e. major topographical features
 - f. pedestrian and vehicular circulation
 - g. land use
3. Black and white 8"x10" photographs of the site and neighborhood

(see section III, f.)

4. Sketches and diagrams to help clarify design issues and massing options for both Option A and Option B. A detailed written sensitivity analysis of these design issues and massing options should accompany the sketches.
5. Eye-level perspective (reproducible line drawings) showing the proposal in the context of the surrounding area
6. Aerial views of the project (existing and proposed)
7. Site sections at 1" = 20' or larger showing relationships to adjacent buildings and spaces
8. Site-plan at an appropriate scale (1" = 20' or larger) showing:
 - a. General relationships of proposed and existing adjacent buildings and open space
 - b. Open spaces defined by buildings on adjacent parcels and across streets
 - c. General location of pedestrian ways, driveways, parking, service areas, streets, and major landscape features
 - d. Pedestrian, handicapped, vehicular and service access and flow through the parcel and to adjacent areas
 - e. Survey information, such as extending elevations, benchmarks, and utilities
 - f. Phasing drawings (plans, perspectives, elevations and sections) of the Arena facility as well as the phasing of the tower elements
 - g. Construction limits
9. Massing model at 1" = 40' and a study model at 1" = 16' showing the facade design will be prepared for the Final PIR.
10. Drawings at an appropriate scale (e.g., 1" = 5') describing architectural massing, facade design and proposed materials including:
 - a. Building and site improvement plans
 - b. Elevations in the context of the surrounding area
 - c. Sections showing organization of functions and spaces
 - d. Preliminary building plans showing ground floor and typical upper floors
 - e. Phasing of each building in the proposed project assume a 1995/96 yr. for an Interim Phase

Drawings describing facade design and proposed materials will be prepared at an appropriate scale for the Final PIR.

- f. Before and after the Greenline is reconstructed
- g. Before and after the Central Artery is reconstructed
- h. Before and after the demolition and reconstruction of Arena.
- 11. Proposed schedule for submittal of design ~~development~~ materials

Appendix 3 includes a list of materials required for the Design Development and Contract Documents submissions.

E. HISTORIC RESOURCES COMPONENT

The North Station/Boston Garden Complex was found to be ineligible for listing on the National Register of Historic Places by the Massachusetts Historical Commission (North Station Urban Renewal Project Final EIR, 11/30/83), therefore it is not listed in the State Register of Historic Places.

However, the Boston Landmarks Commission staff considers that the structure merits documentation, and requests the following before it is demolished:

Photographic Documentation:

- Present day Views, HABS level (Black & White, large format, not less than 4x5);
- Photographic copies of historic views;
- Photographic copies of original drawings;

Historic Documentation:

The structure merits a report summarizing the significance of its social, cultural, political and entertainment history;

Architectural/Engineering Documentation:

A summary report on the building type. Boston Garden is reportedly, only one of four buildings of its type in North America; the others are the Maple Leaf Gardens in Toronto, the Montreal Forum and Chicago Stadium.

The developer is required to submit copies of this information ^{to} be deposited at the Boston Landmarks Commission, the Massachusetts State Archives and the Boston Sports Museum.

F. INFRASTRUCTURE SYSTEMS COMPONENT

An infrastructure impact analysis must be performed ~~for Option A.~~

for the proposed project.

1. Utility Systems and Water Quality

- a. Estimated water consumption and sewage generation from the project

- b. Description of the capacity and adequacy of water and sewer systems and an evaluation of the impacts of the project on those systems
- c. Identification of measures to conserve resources, including any provisions for recycling
- d. Description of the project's impacts on the water quality of Boston Harbor or other water bodies that could be affected by the project, if applicable
- e. Description of mitigation measures to reduce or eliminate impacts on water quality
- f. Description of impact of on-site storm drainage on water quality

2. Energy Systems

- a. Description of energy requirements of the project and evaluation of project impacts on resources and supply
- b. Description of measures to conserve energy usage and consideration of the feasibility of including solar energy provisions or other on-site energy provisions.

The discussion of project impacts on infrastructure systems should be organized system-by-system as suggested above. The applicant's submission must include an evaluation of the proposed project's impact on the capacity and adequacy of existing water, sewerage, energy (including gas and steam), and electrical communications (including telephone, fire alarm, computer, cable, etc.) utility systems, and the need reasonably attributable to the proposed project for additional systems facilities.

Any system upgrading or connection requiring a significant public or utility investment, creating a significant disruption in vehicular or pedestrian circulation, or affecting any public or neighborhood park or streetscape improvements, comprises an impact which must be mitigated. The DPIR must describe anticipated impacts in this regard, including specific mitigation measures, and must include nearby proposed project buildout figures in the analysis, as well as utility reconfigurations proposed under the Central Artery project.

The project's  *on* 

The Proposed Project must also address relocation of, and improvements or terminations to, any active utility lines which cross or enter the site. In addition, potential impacts ~~associated with~~ the planned Green Line reconstruction and direct connections to the Green Line, Orange Line, and Commuter Rail stations and tracks must be included in this analysis. If these interfaces are more fully treated in another section of the DPIR, that discussion should be referenced here.

Additional constraints or information required are described below.

- (1) The location of transformer and other vaults required for electrical distribution or ventilation must be chosen to minimize disruption to pedestrian paths and public improvements both when operating normally and when being serviced, and must be described.
- (2) Sewer systems and stormwater systems must be separated if possible; utilization of combined systems should be avoided. Thorough analysis and continuing discussions with BWSC are required.
- (3) Water supply systems adjacent to the project and servicing the project should be looped so as to minimize public hazard or inconvenience in the event of a main break.
- (4) More information is required regarding Boston Edison's ability to supply electrical energy for project needs with or without the referenced new substation planned for the area, and regarding the new substation itself if it will be required to meet future electricity demands in the project area.

G. ANALYSIS OF MASSING ALTERNATIVES

An environmental analysis should be conducted to determine whether adjustments to the project's bulk and massing result in any significant benefits, as compared with the project as proposed. Studies of massing alternatives should comprise sensitivity analyses, which qualitatively address all DPIR environmental, urban design and infrastructure topics. Sensitivity analyses should indicate whether any specific massing configurations warrant detailed quantitative analysis in the Final PIR.

APPENDICES

SP6/06.RPT
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APPENDIX 1

REQUIRED FINANCIAL INFORMATION NEW BOSTON GARDEN DEVELOPMENT

DEVELOPMENT PROFORMA includes all the information normally found in a development proforma, by phase. This includes, but is not limited to:

Land acquisition costs, per land square foot and total, by parcel. Include distinctions between attributed value and actual out-of-pocket costs, if any. Also include any imputed or actual carrying costs.

Attribution of acquisition expense over project components (per FAR square foot residential, hotel, office, retail, arena parking, etc.).

All hard costs on a per-unit and total basis, by phase (disaggregated into base building, tenant improvement work, rehabilitation work, residential finishes, garage cost, site work, furniture, fixtures and equipment, etc.).

All soft costs on a per-unit and total basis, by phase (disaggregated into individual line items such as architectural, engineering, legal, accounting and developer's fees and any other professional fees, insurance, permits, real estate tax during construction, etc.).

All contingencies on a per-unit and total basis, by phase (specify whether contingency is on hard cost, soft cost, or total cost).

All assumptions regarding financing terms on acquisition, pre-development, and construction loans, by phase (including financing fees, interest rates, terms, drawdown assumptions, terms, participations, amortization).

Calculation of housing and jobs linkage obligation in accordance with Articles 26A and B, and anticipated payment method (over term of obligation or on a net present value basis).

Any other project-related expenses not within any of the above categories.

Calculation of total development cost by component, including total and per unit breakdown (e.g. per square foot office, residential, retail, arena, etc., per parking space, etc.).

Sources of debt and equity for total project costs. Appropriate return measures (return on equity, return on total development cost, internal rate of return; specify method of calculation and hurdle rates).

15-YEAR OPERATING PROFORMA includes all the information normally found in an operating proforma, on a yearly basis. This includes, but is not limited to:

Tabulation of gross and net (leasable) square feet for all commercial space, number of hotel rooms, etc.

Schedule of all rents whether base or percentage rents, on a per square foot and total basis (including anticipated garage rates and occupancy), hotel room rates and projected hotel occupancy rates, and marina revenues.

Anticipated operating expenses and real estate taxes on per square foot and total basis, and clear explanation of division of expenses between owner and tenant (includes all commercial space, hotel, arena, and garage).

Breakdown of projected ticket sales and prices, skybox rentals, projected concession revenues, and other income/expense figures unique to the operation of an arena facility.

All other expense and vacancy assumptions set forth to calculate cash available for debt service.

Anticipated leasing patterns (5-yr, 10-yr, etc.), lease-up rates and calculation of operating deficits if any.

Tenant inducements including free rent, tenant improvement allowances, etc.

Calculation of debt service, before tax cash flow, debt coverage ratios.

